Enefit Utah Project

The Real Impacts of Oil Shale and Oil Sands Development in Utah

Utah Governor's Energy Development Summit

Salt Lake City, Utah January 10, 2013

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Enefit American Oil

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Presentation Topics

- Enefit Overview
- Overview and Status of the Utah Project
- Air Quality
- Similarities and Differences in the Estonian and Utah Oil Shale Industry

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Enefit Overview

- Enefit is a mining and oil company with a state-owned parent company in Estonia employing more than 7,400 people
- Bonds listed on the London Stock Exchange
- 30-year track record of producing liquid fuels out of mined oil shale

Oil Shale Mining

Nearly 100 years' operations and more than 1 billion tons of oil shale mined

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Oil Shale Power Generation

Provides 91% of Estonia's electricity, more than 600 TWh produced

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Shale Oil Production

50 years of surface retorting experience and 30 years of commercial operations

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International Development

Enefit international development projects are based on best available technology

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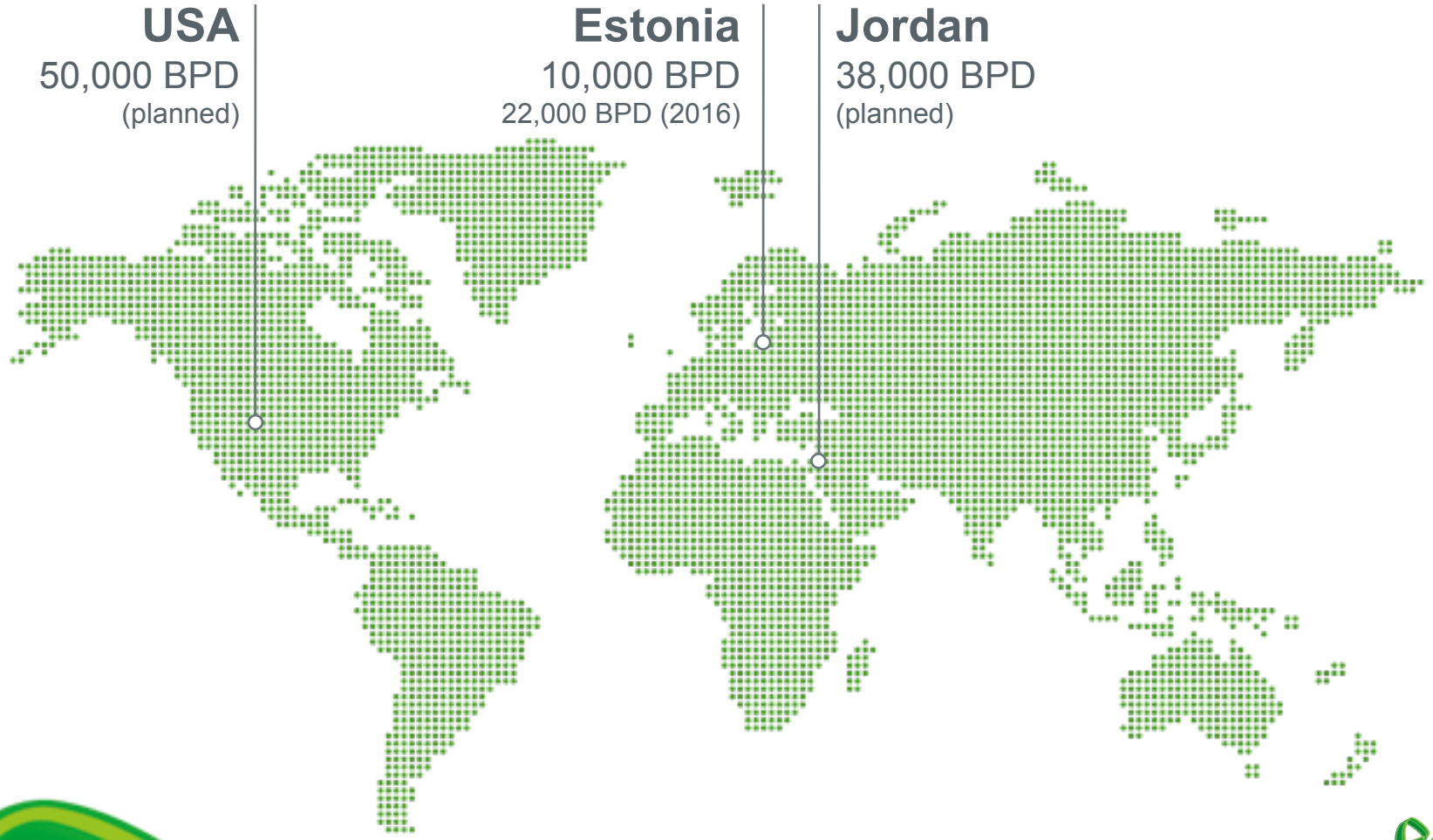
Enefit Shale Oil Operations



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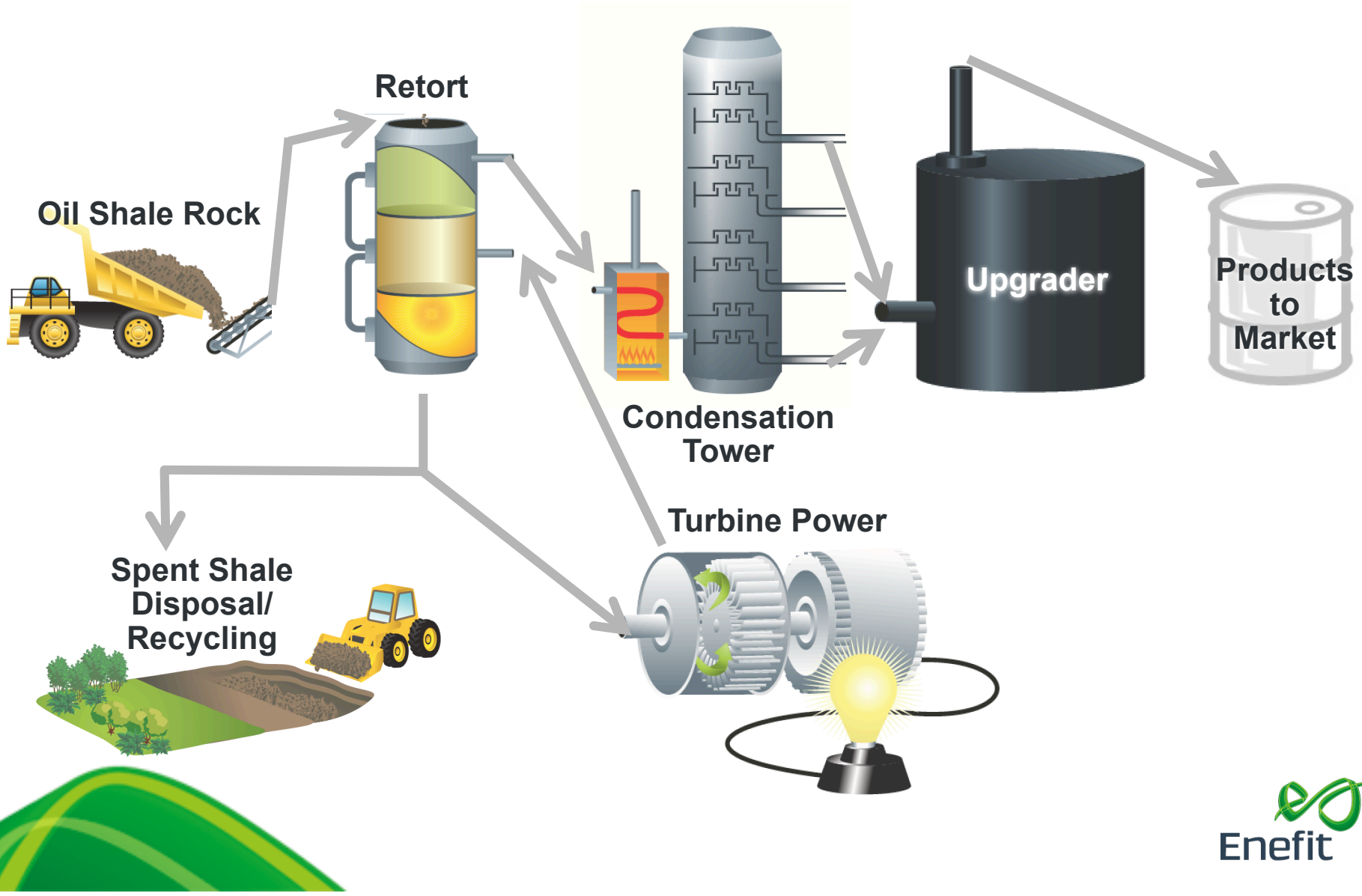
Shale Oil Extraction



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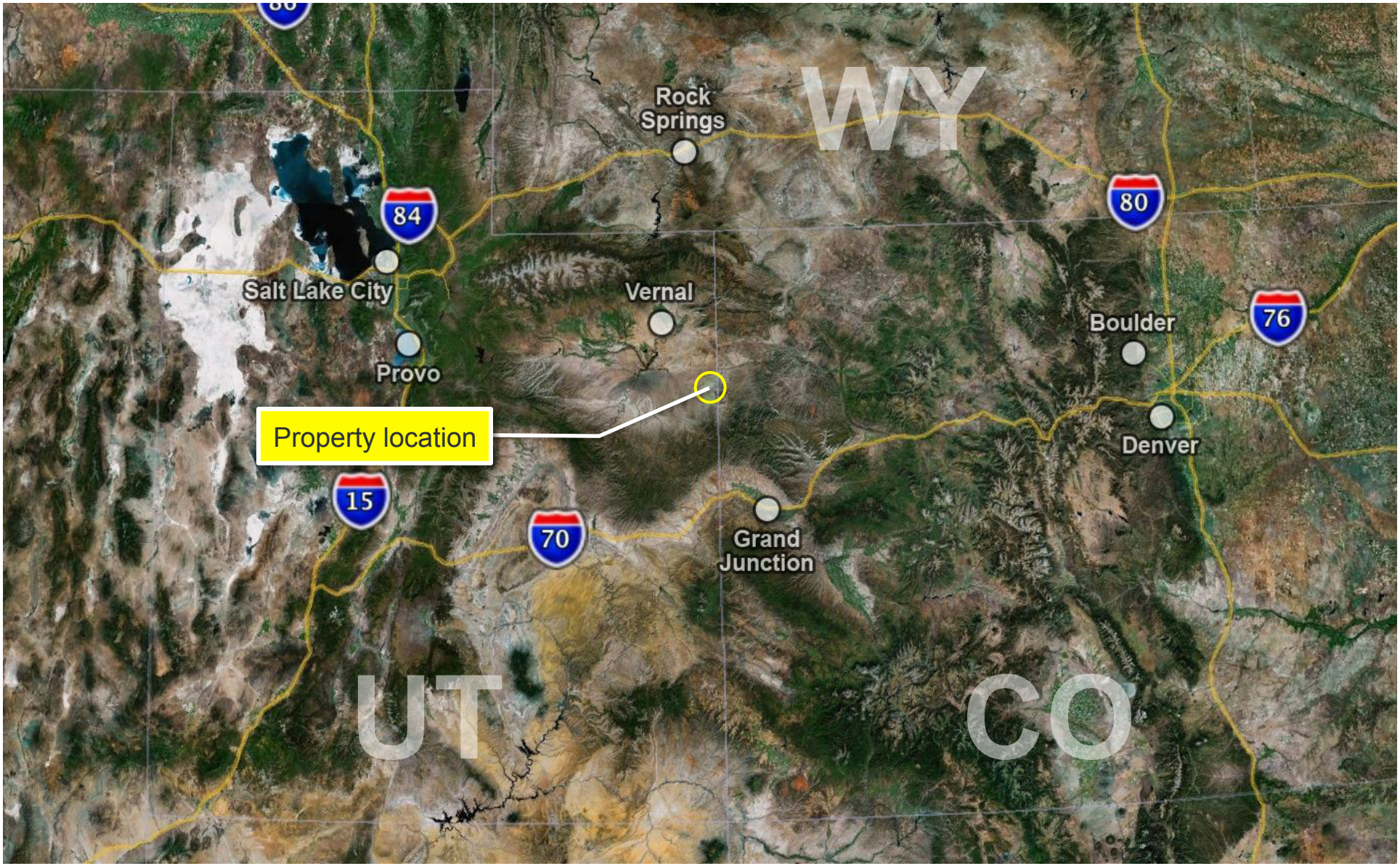
Enefit's Utah Location



Enefit's Utah Location

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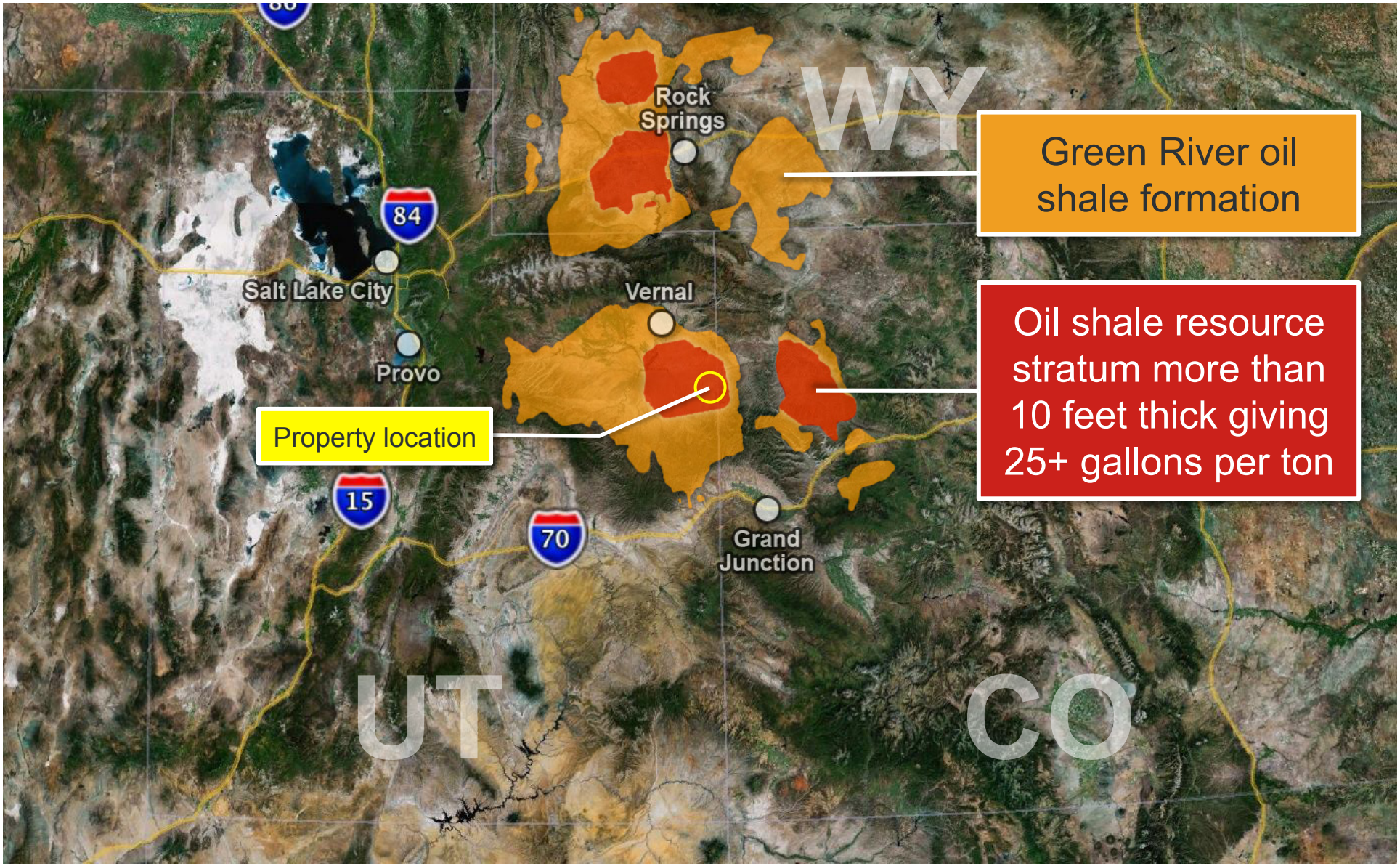

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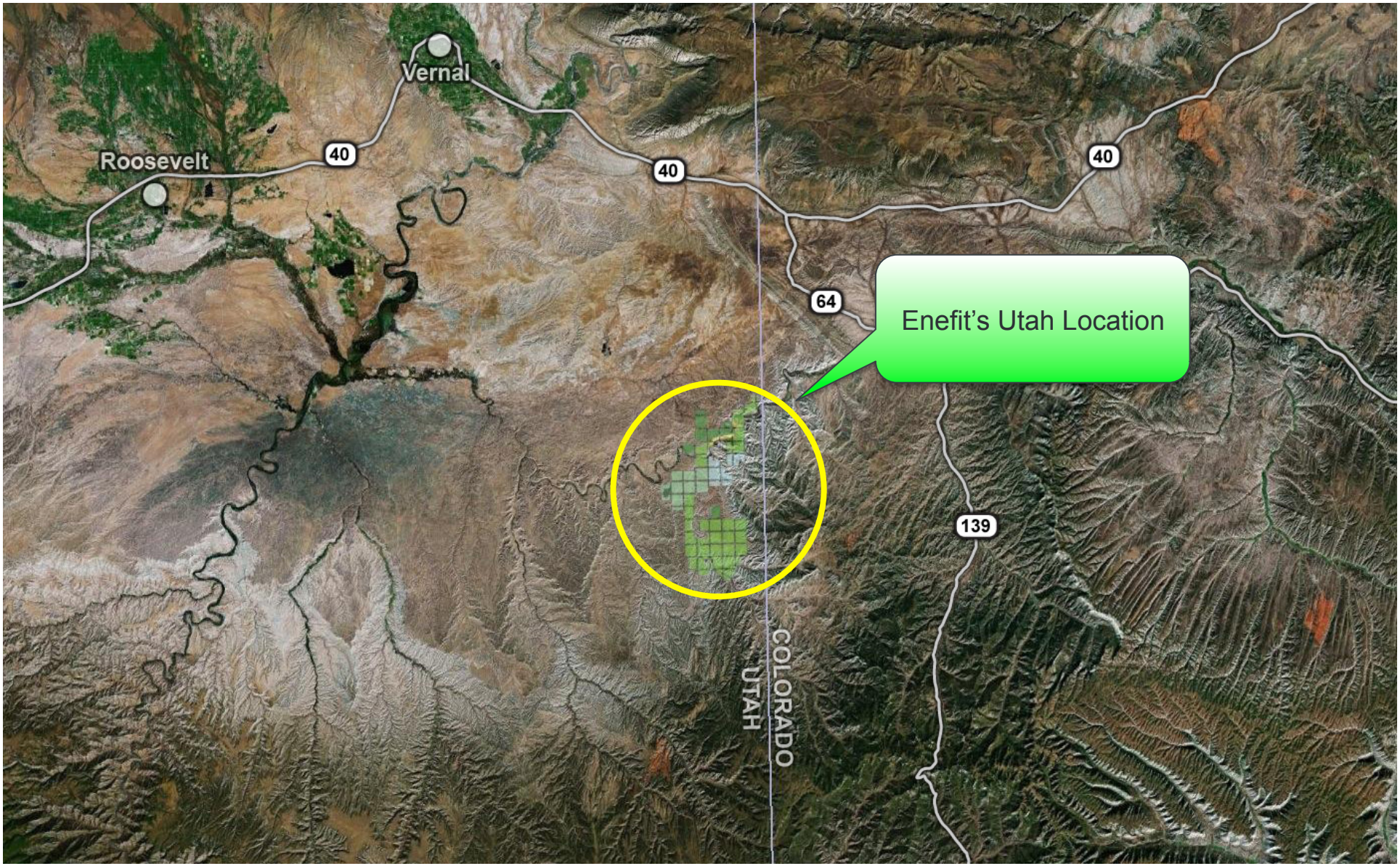
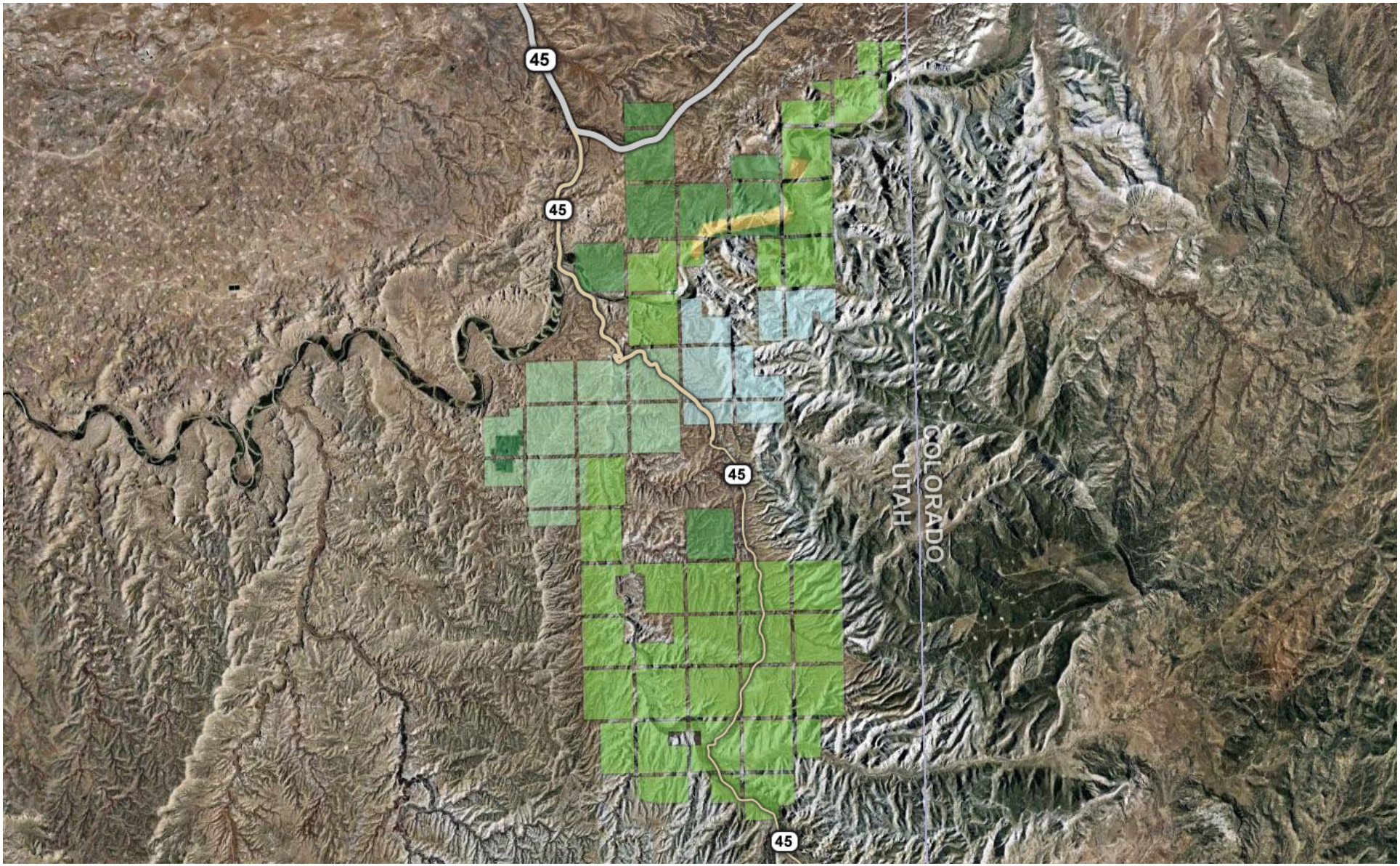
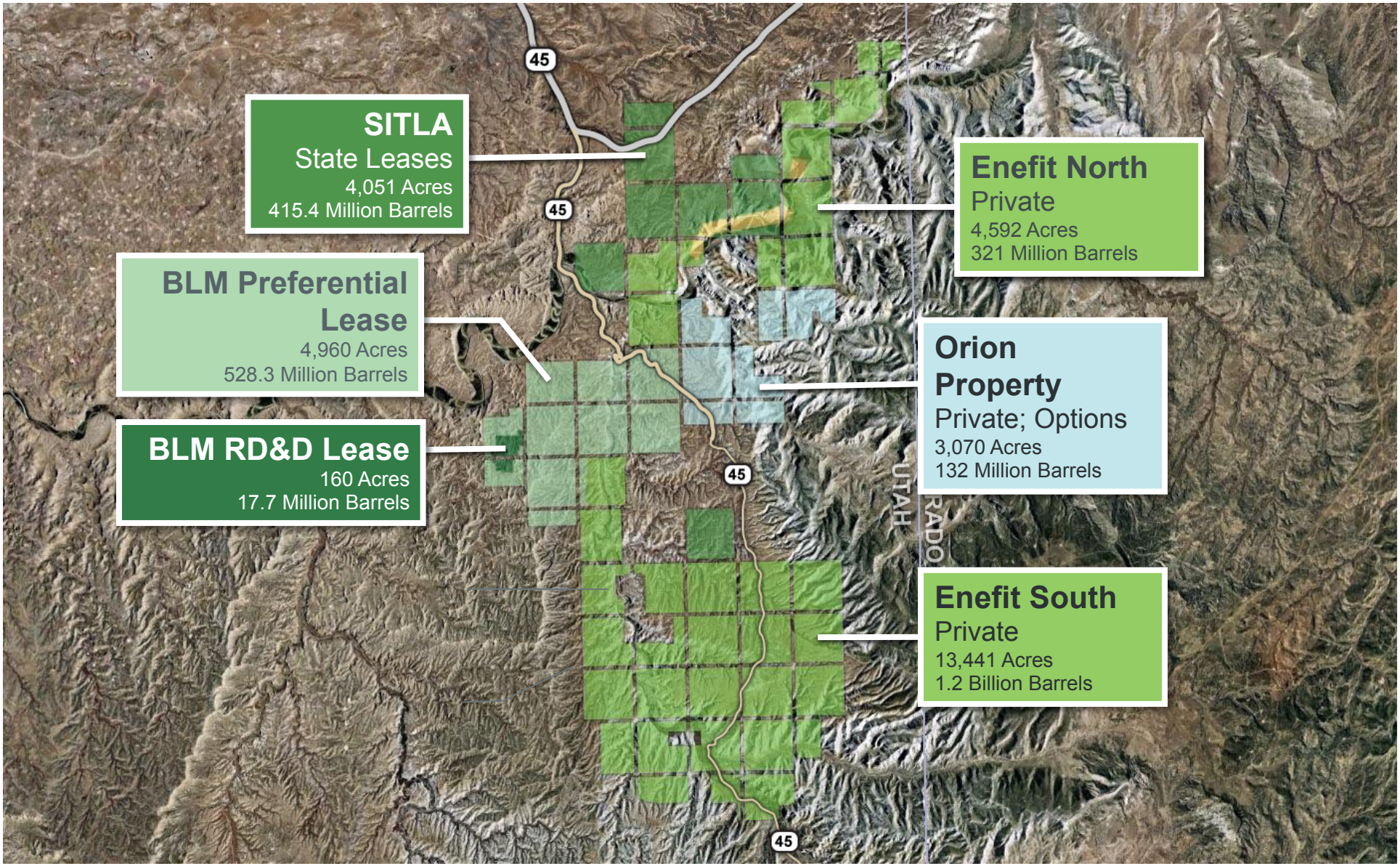


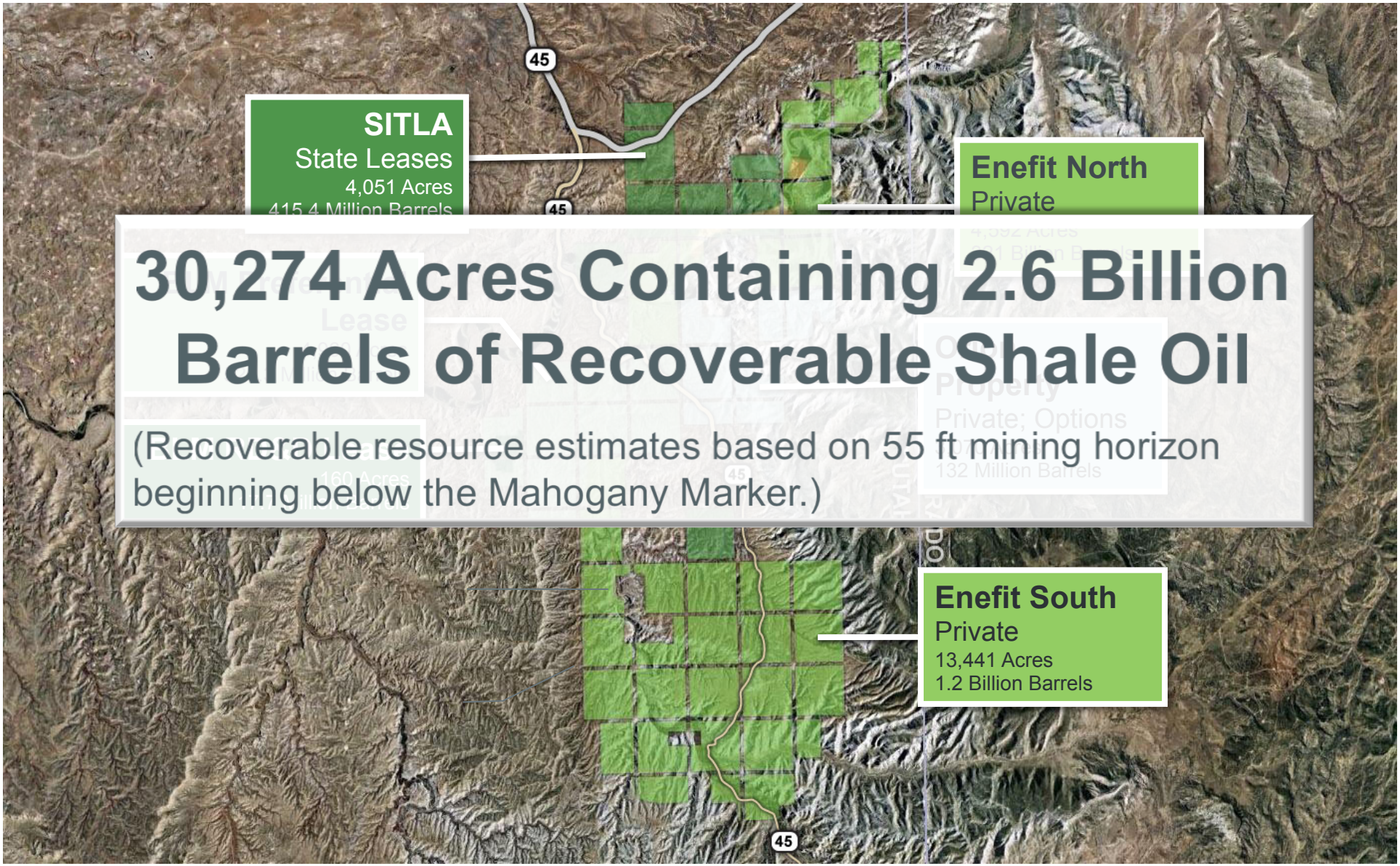
Enefit's Utah Location



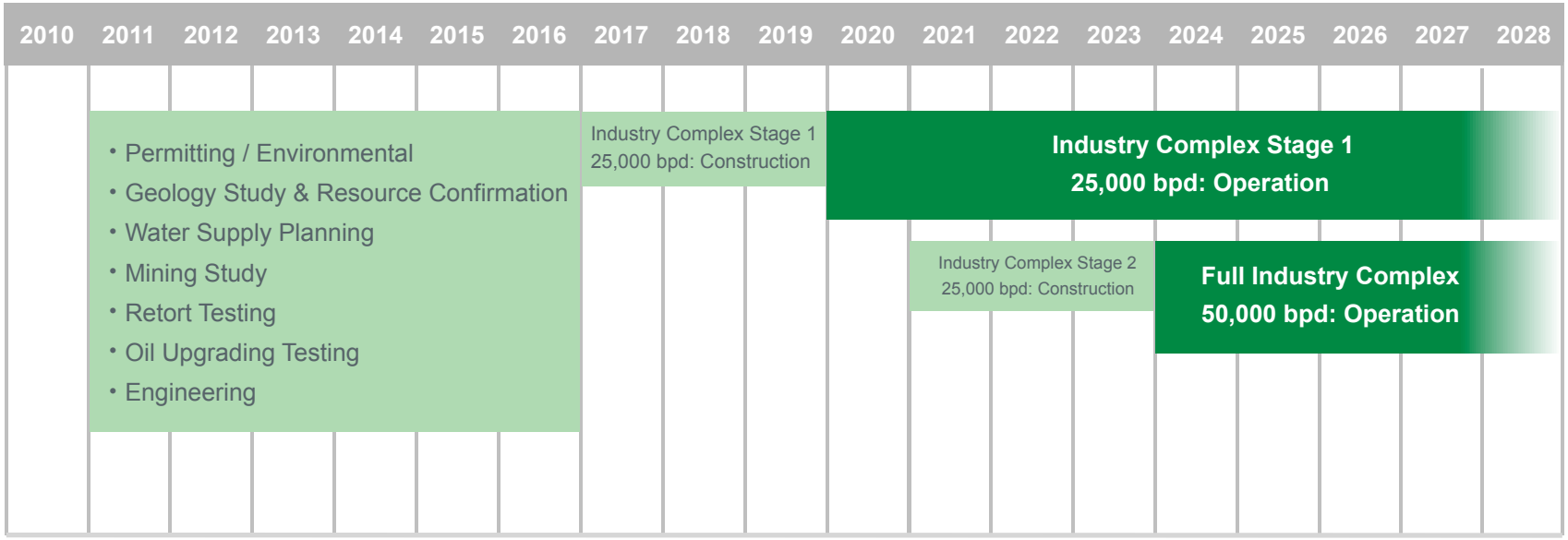
Enefit Controlled Resources



Enefit Controlled Resources



Enefit Utah Project Timeline



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Enefit Utah Development Schedule

(Subject to Change)

2011

Phase 1
Exploration Drilling

12-ton Bulk Sample

Plant Site Selection Study

Mining Concept Study

Market Study

Water Supply Plan

2012

Phase 2
Exploration Drilling

600-ton Bulk Sample

Mining
Pre-Feasibility Study

Retort Bench Testing

Oil and Gas Crude Assay

Oil Upgrading
Conceptual Study

Environmental Baseline
Data Collection

2013

Market Study Update

Pilot Testing

Project-Wide
Pre-Feasibility Study

Environmental Baseline
and Permitting

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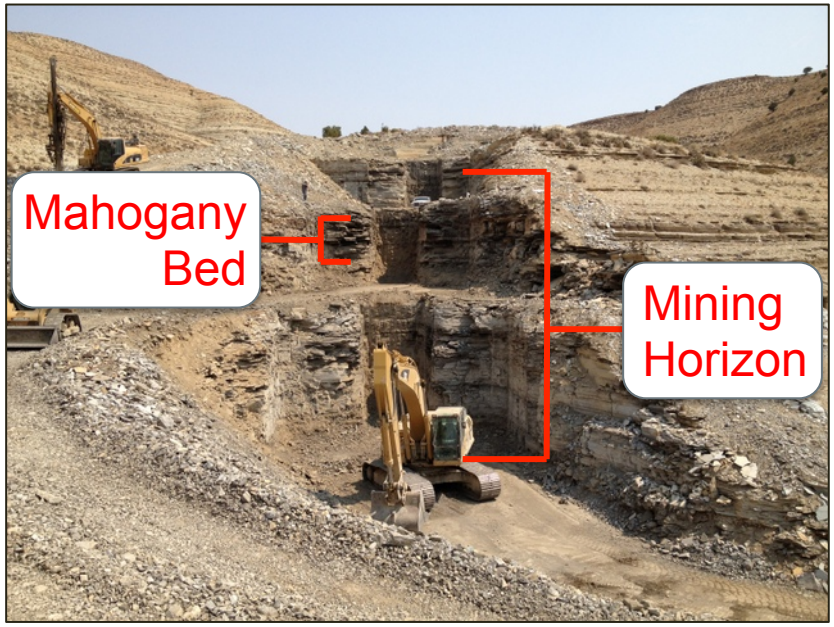
Bulk Sample – Box Cut



Drill and blast to expose a vertical cut of the 60-foot mining horizon

8’ x 8’ x 8’ box cut into the 60-foot face by drilling and blasting the full volume of shale onto the bench below

600 tons of sample from the mining horizon readily available for pilot plant testing in 2013

Following pilot retort testing, the oil will be sent for pilot upgrading testing by the selected hydrotreater technology provider

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Environmental Baseline Activities

(Subject to Change)

- Baseline Data Collection
  - Ambient Air Quality, January 2012 – June 2013
  - Surface Water and Groundwater Resources, Fall 2012 – Fall 2013/14
  - Biological Resources, Spring/Summer 2012-2013
  - Cultural Resources, Spring/Summer 2013
  - Socioeconomic Conditions, Summer 2013
- Field surveys to include both project site and utility corridors

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Environmental Permitting Plan

Environmental Permit List

Federal

- Right of Way Grant for utility corridor, Bureau of Land Management Vernal Field Office
- Individual Permit for dredge and fill, United States Army Corps of Engineers
- Prevention of Significant Deterioration for air quality, Environmental Protection Agency
- Title V Operating Permit, Environmental Protection Agency
- Endangered Species Act Section 7 Consultation, United States Fish and Wildlife Service

State

- Authorization to Conduct Large Mine Operations, Utah Division of Oil, Gas, and Mining
- Streambed Alteration Agreement for dredge and fill, Utah Division of Water Rights
- Water Quality Certification, Utah Division of Water Quality
- Dam Safety, Utah Division of Water Rights/State Engineer's Office
- Utah Pollutant Discharge Elimination System, Utah Division of Water Quality

Local

- Conditional Use Permit, Uintah County

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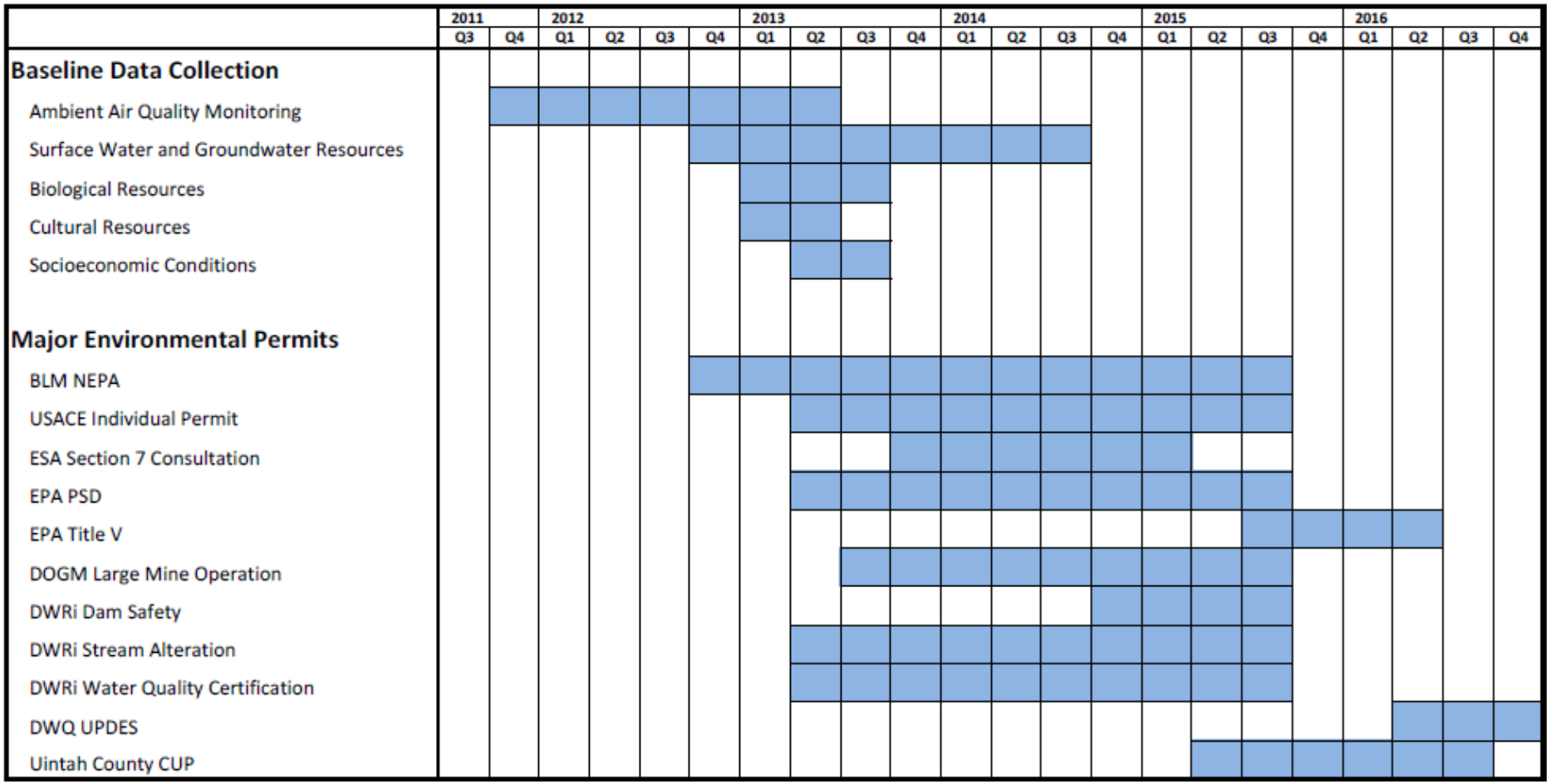
Environmental Permitting Timeline



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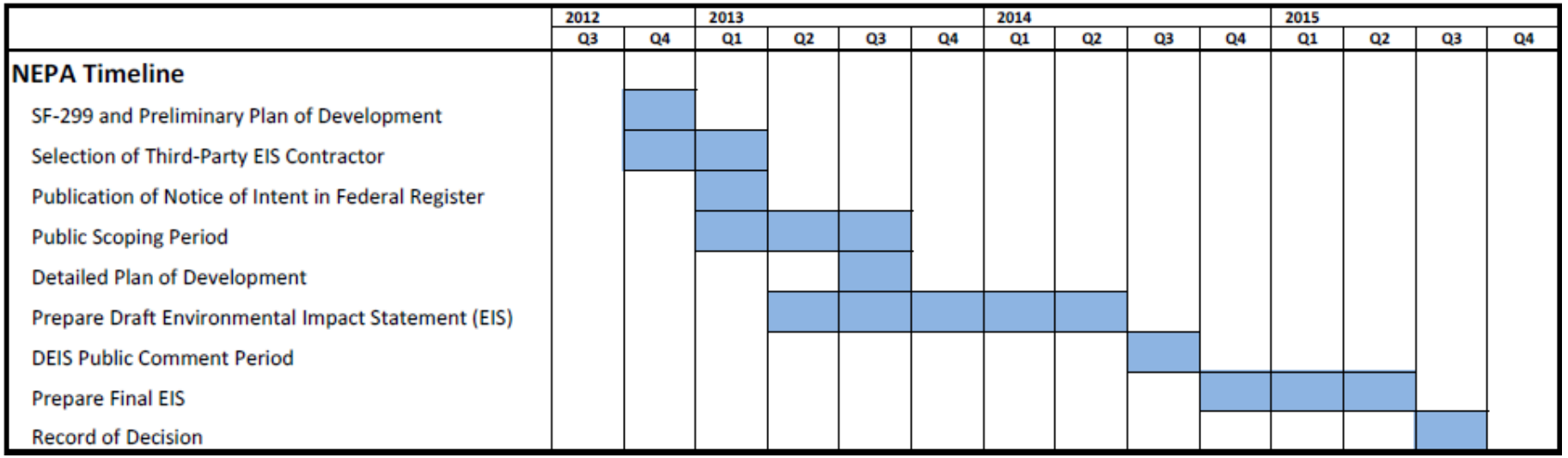
NEPA Timeline



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Ambient Air Quality Baseline Data Collection

Current Status

- QAPP formally approved by EPA
- Operation formally started Jan 1, 2012; required monitoring for 1.5 years

Monitoring Station Description

- 60 m tower with monitors at 10, 30 and 60 m
- Meteorological Data Collection
  - Wind Speed and Direction
  - Vertical Wind Speed
  - Ambient Temperature
  - Vertical Temperature Difference (Delta-T)
  - Radiation
  - Precipitation
  - Relative Humidity
  - Barometric Pressure
- Ambient Air Quality Data Collection
  - PM10
  - PM2.5
  - Ozone
  - NO-NOx
  - SO2
  - CO

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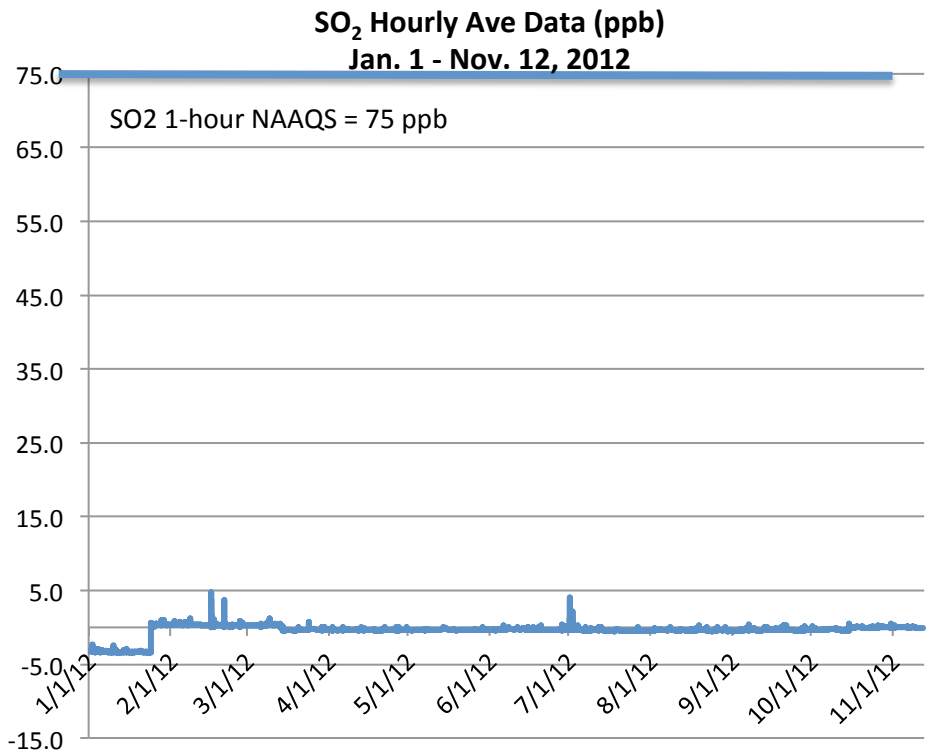
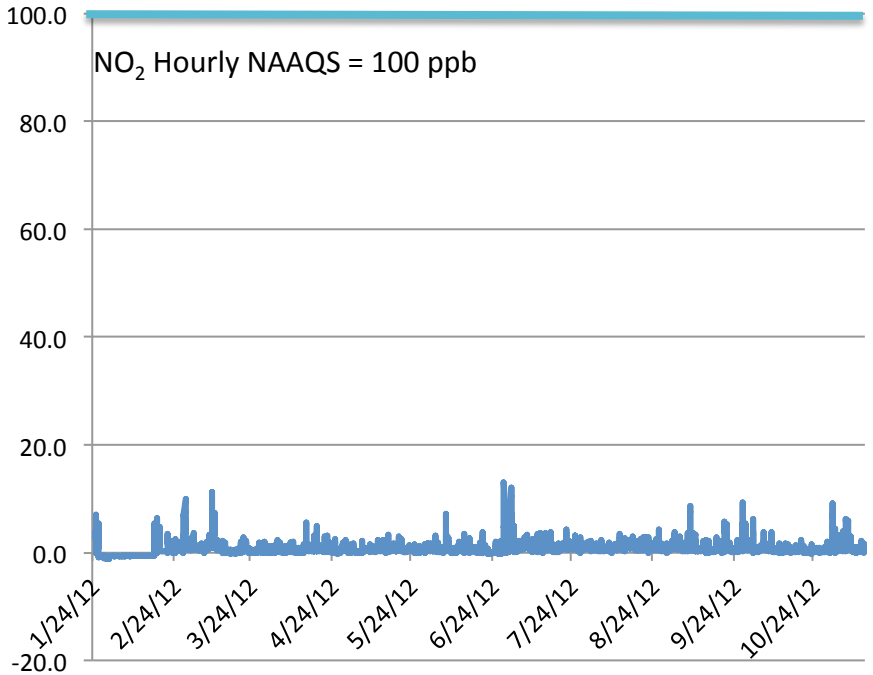
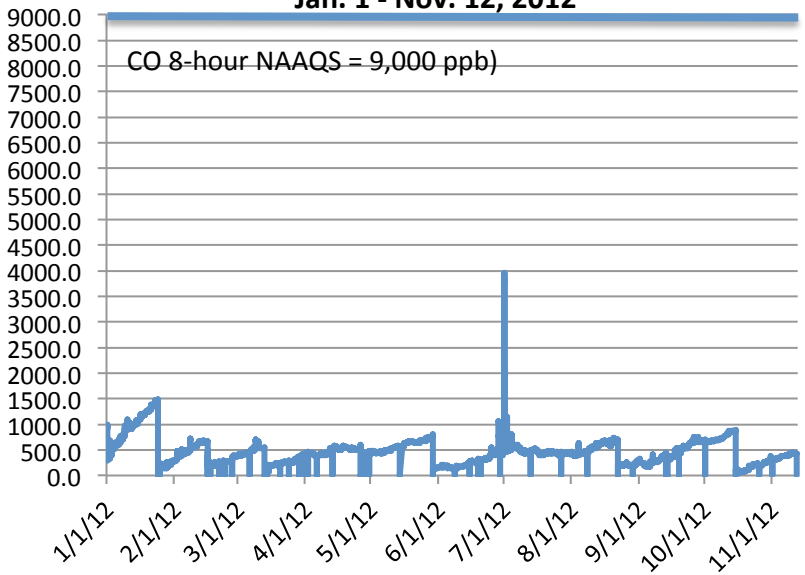


SO_2 Hourly Ave Data (ppb)
Jan. 1 - Nov. 12, 2012



NO_2 Hourly Ave Data (ppb)
Jan. 23 - Nov. 12, 2012



CO Hourly Ave Data (ppb)
Jan. 1 - Nov. 12, 2012

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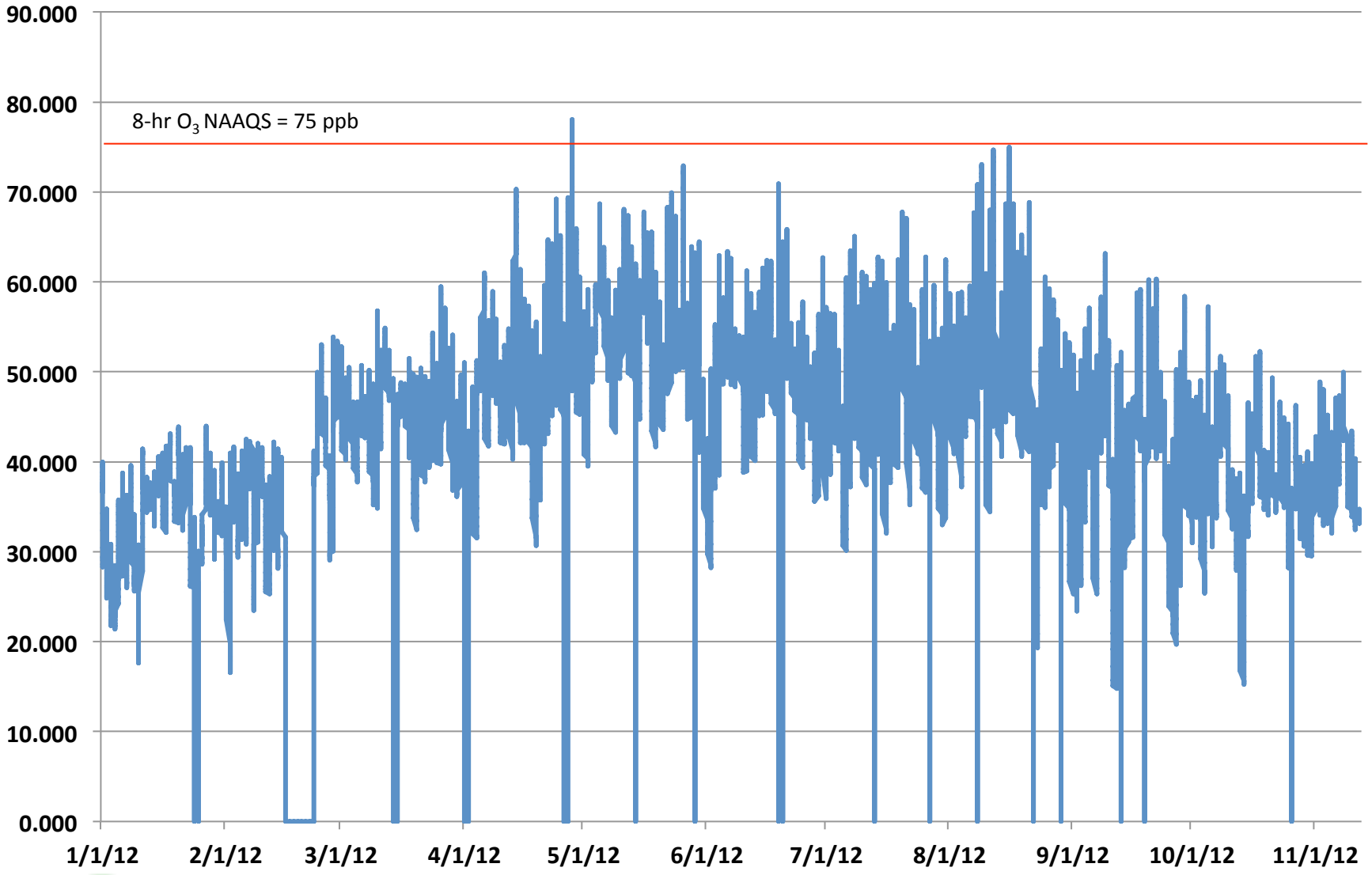
O_3 8-Hr Ave Data (ppb)
Jan. 1 - Nov. 12, 2012



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O_3 Hourly Ave Data (ppb)
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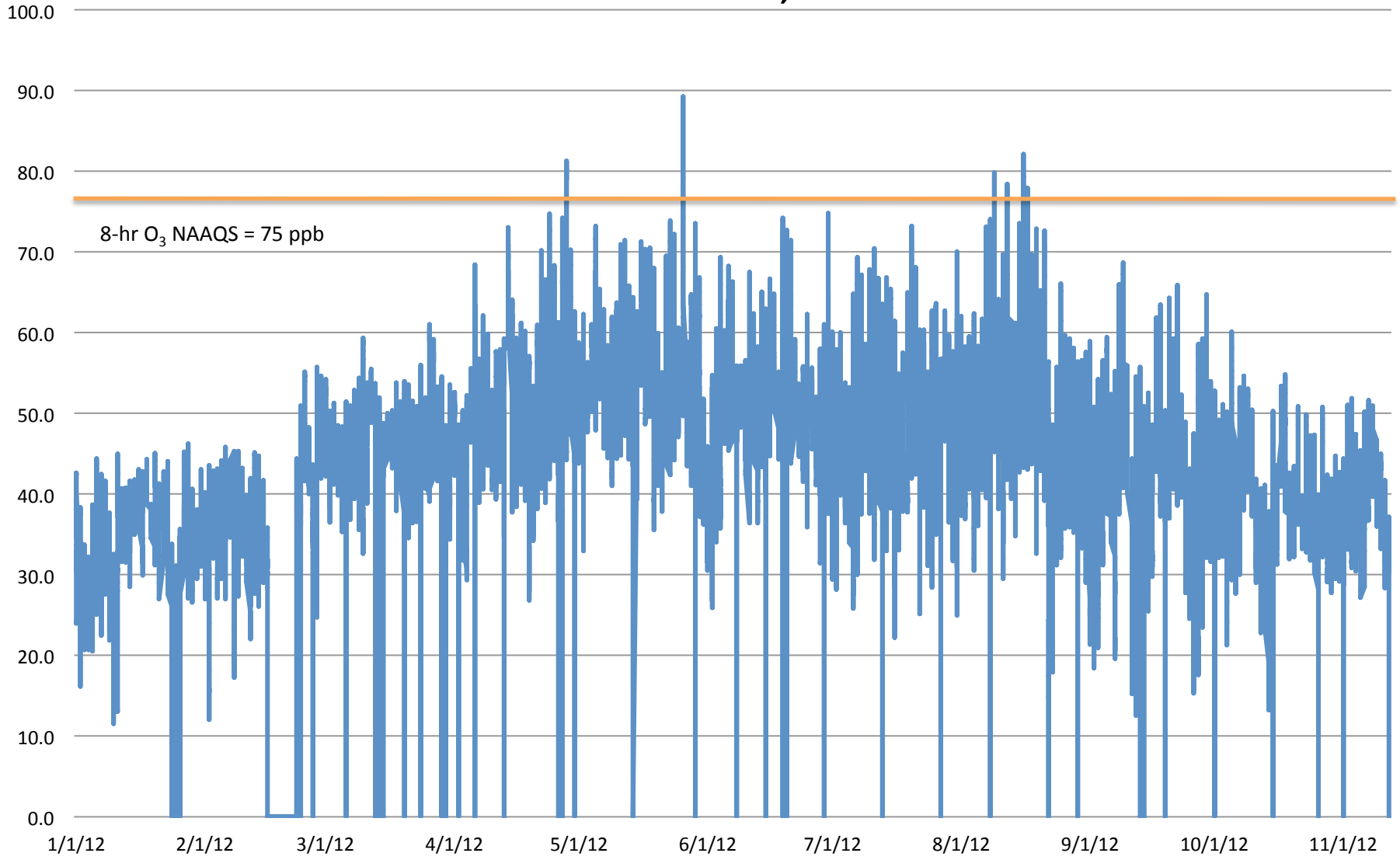

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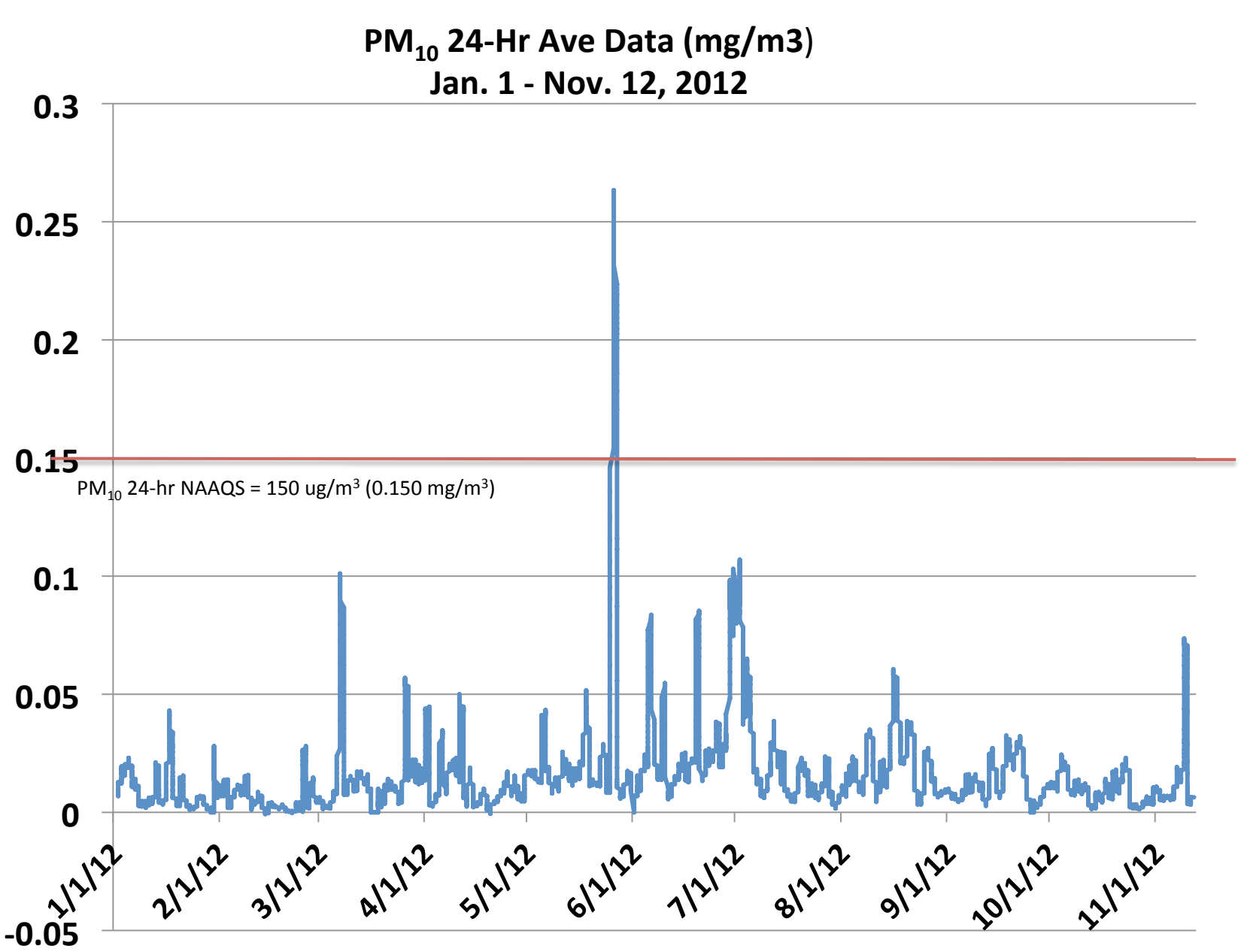
PM10 24-Hr Ave Data (mg/m3)
Jan. 1 - Nov. 12, 2012
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
PM10 24-hr NAAQS = 150 ug/m3 (0.150 mg/m3)
1/1/12
2/1/12
3/1/12
4/1/12
5/1/12
6/1/12
7/1/12
8/1/12
9/1/12
10/1/12
11/1/12

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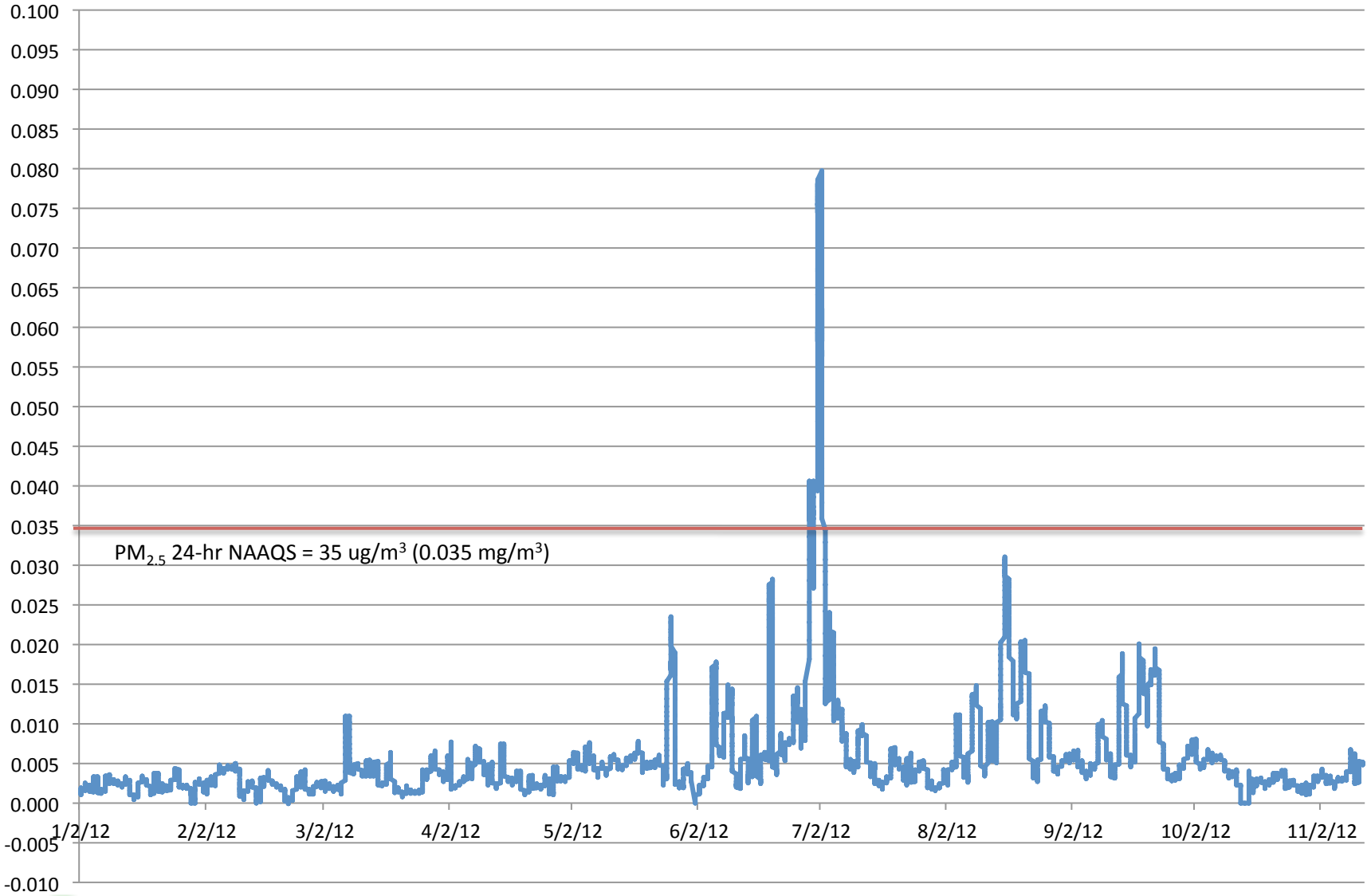
$PM_{2.5}$ 24-Hr Ave Data (mg/m3)
Jan. 1 - Nov. 12, 2012



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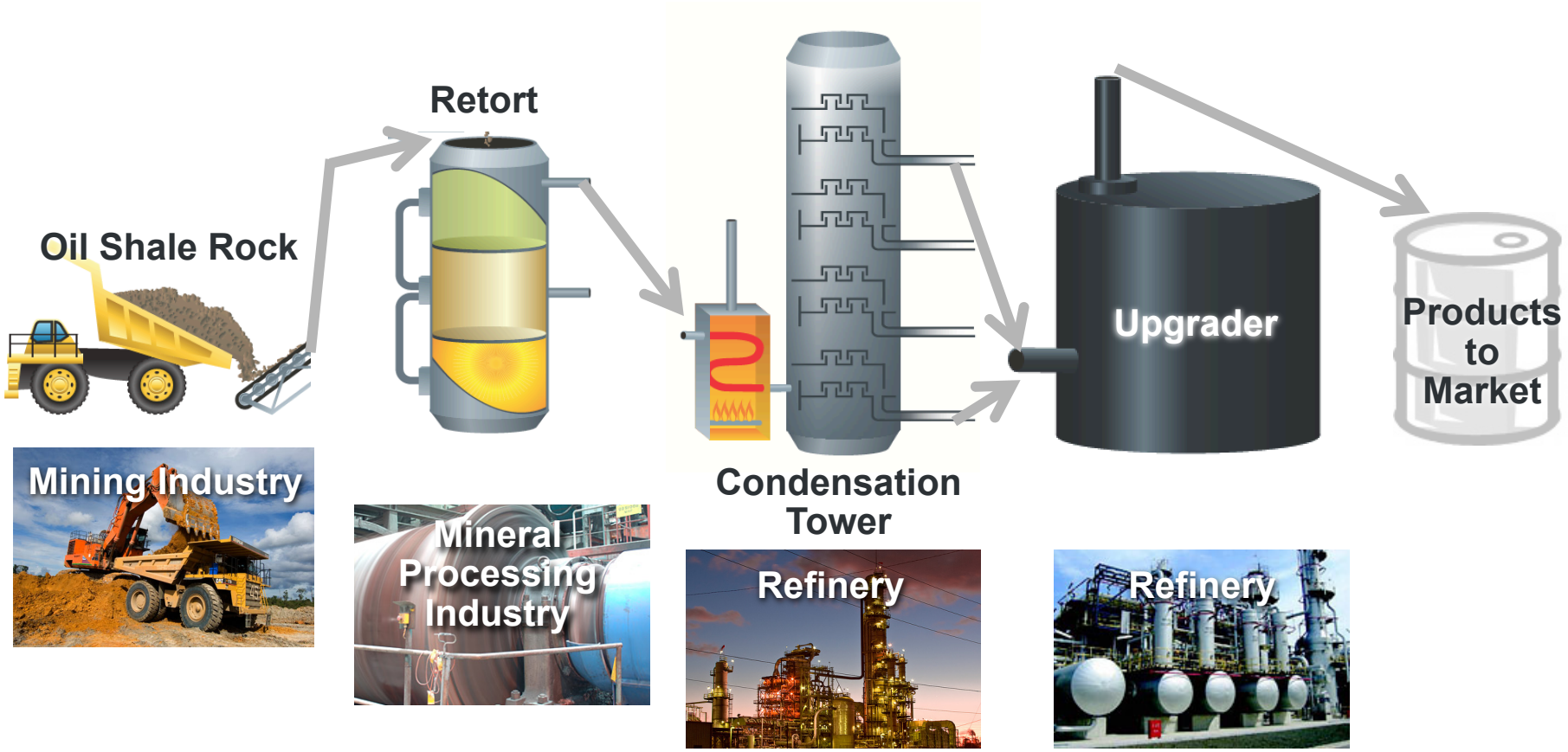

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Directive 2010/75/EU on Industrial Emissions and Pollution Control

In the absence of a commercial oil shale industry in the U.S., Enefit is using the EU Industrial Emissions Directive to inform Utah Project design.

- EU sets emissions limit values (ELVs) on:
  - NO_x, SO_2, CO, and dust (i.e. PM10 and PM2.5)
- Identifies Best Available Technologies (BATs) for industry
- Analogous to EPA's RACT / BACT / LAER Clearinghouse
- EU ELVs and BATs are being used as starting point for Utah Project design
- IED also addresses pollution prevention and control

"During the past two decades, the European Union (EU) has emerged as the global leader in international environmental politics." – Dr. R. Daniel Kelemen, Rutgers University, 2009

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Similarities and Differences

Estonian Oil Shale Industry

- Mature, experienced; a century's worth of lessons learned, including 30 years of oil production
- Aggressive project development and investment in future production
- Water-plentiful environment
- Rigid set of clear environmental and emissions standards required to meet
- Review process that emphasizes local community involvement and education

Utah Oil Shale Industry

- New and unfamiliar; yet a blend of existing industrial processes
- Methodical, reasoned development of a new industry
- Broad range of environmental approvals required, at multiple regulatory levels
- Air emissions permitted on a case-by-case basis
- Arid environment where water conservation is a priority

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Environmental Protection Summary

- 1.5 years of baseline data collection started January 2012
- Planning and preparation for EIS started
- Analogous industry examples apply to help guide project design
- Best available air emission controls and monitoring to meet air quality regulations
- Project will be designed for minimal water use, and ash backfilling will minimize land disturbance and allow for reclaiming the mine to natural conditions

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